Amendments to the Claims:

The following Listing of Claims will replace all prior versions, and listings,
of claims in the application.

1   1. (currently amended) A data processing node configured to participate in global

2   transactions comprising:

3   A) a transaction processing application operating within a global transaction

4   processing protocol incorporating a two-phase commit procedure;

5   B) coupling means to at least one other data processing node operating within the

6   global transaction processing protocol for information exchange therewith;

7   C) a memory storing database files subject to access during transaction processing;

8   D) a database access application communicating with the transaction processing

9   application to address files stored in the memory and transfer data between the

10   transaction processing application and the memory;

11   E) a file management system having exclusive access to reserved locations in the

12   memory for reading and writing meta-data therein, which meta-data for each file

13   stored in memory during transaction processing includes an undo log, and the undo

14   log entry for each file affected by a data processing node failure is accessed after

15   restart to provide information essential to rebuilding the state of the transaction at

16   the data processing node at the time of the failure;

17   F) physical file access logic selectively coupling the memory and the database

18   access application, the physical file access logic incorporating file protections

19   which are controlled by the file management system; and

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20   G) node recovery means for recovering following a system failure which occurs

21   during transaction processing on a database stored in said memory and faithfully

22   rebuilding, after restart, the data processing node to the state immediately prior to

23   the failure; said node recovery means including:

24   1) means to remove the results of incomplete non-"in-doubt" transactions;

25   2) means to lock files which have been updated by "in-doubt" transactions;

26   and

27   3) means for permitting normal access to the database after the operations

28   carried out by the means set forth in subparagraphs G)1) and G)2) have

29   completed-; and

30   the data processing node being further characterized in that:

31   H) "recovery-needed", "recovery-done" and "in-doubt" counts are normally

32   maintained in individual file description records and in which, in the event of a

33   data processing node failure as evidenced by a difference between a boot sequence

34   identifier of the current system boot and a boot sequence identifier as recorded in

35   the file description record; and

36   I) if the node failure occurs when there is a non-zero "in-doubt" count, then, during

37   restart:

38   1) if the "recovery-needed" is non-zero, both the "recovery-done" and "in-

39   doubt" counts are cleared; and

40   2) if the "recovery-needed" is zero and the "in-doubt" is non-zero, the

41   original "recovery-needed" count is reinstated.

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1   2. (cancelled)

1   3. (cancelled)

1   4. (cancelled)

1   5. (cancelled)

1   6. (currently amended) The data processing node of Claim $\not{5}1$ in which the rebuild
2   effected is to the "in-doubt" state.

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